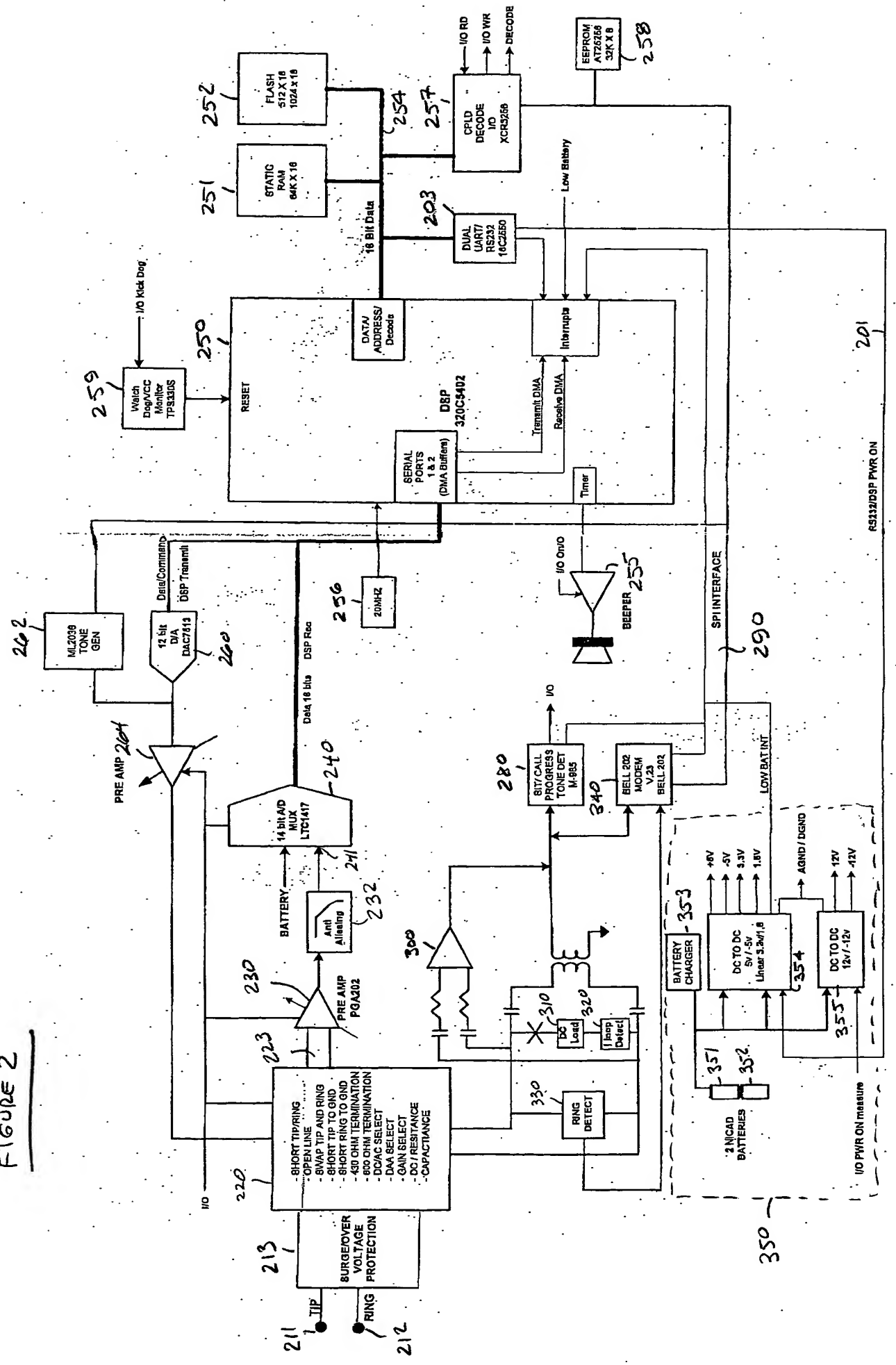


FIGURE 1

FIGURE 2



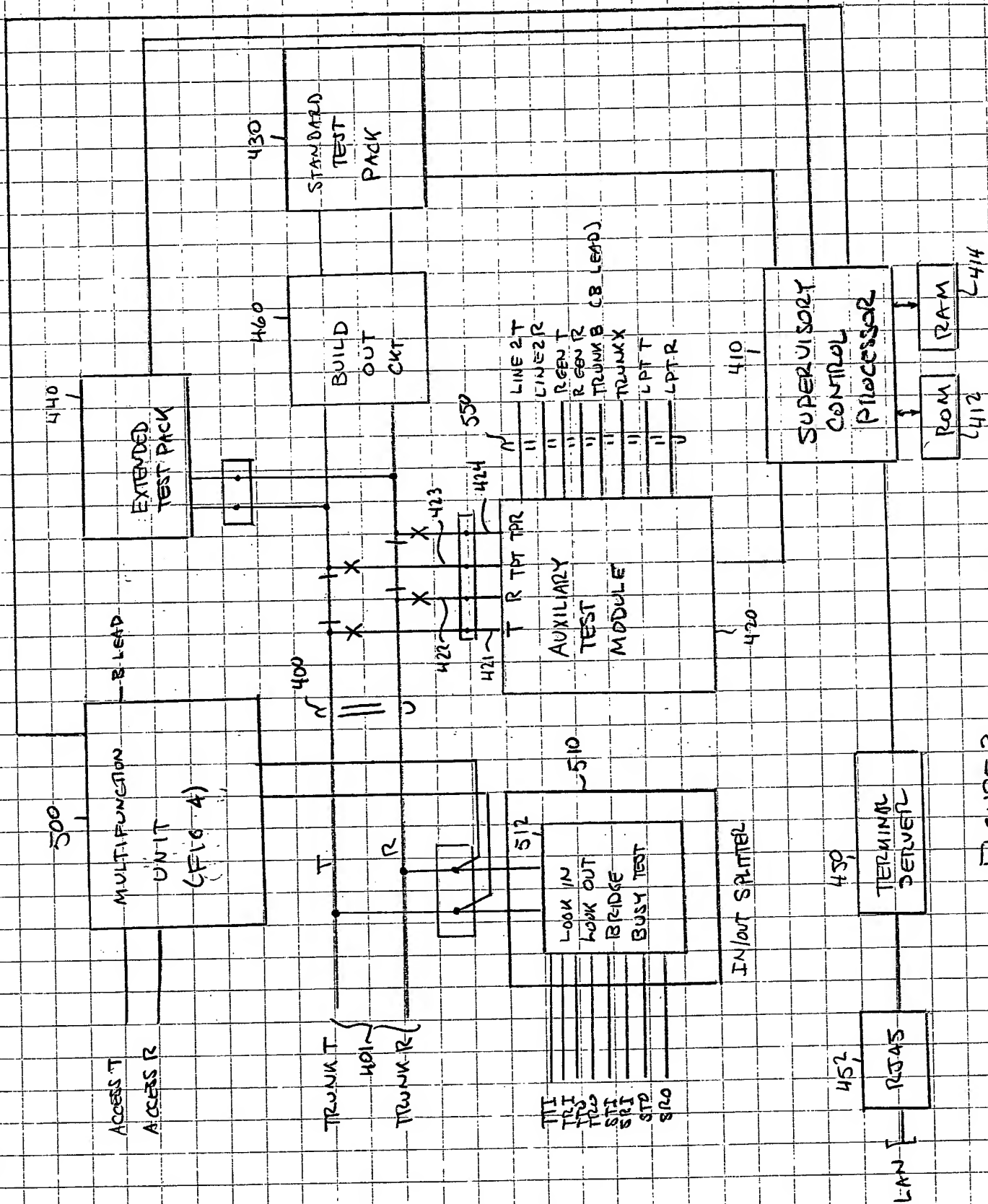


Figure 3

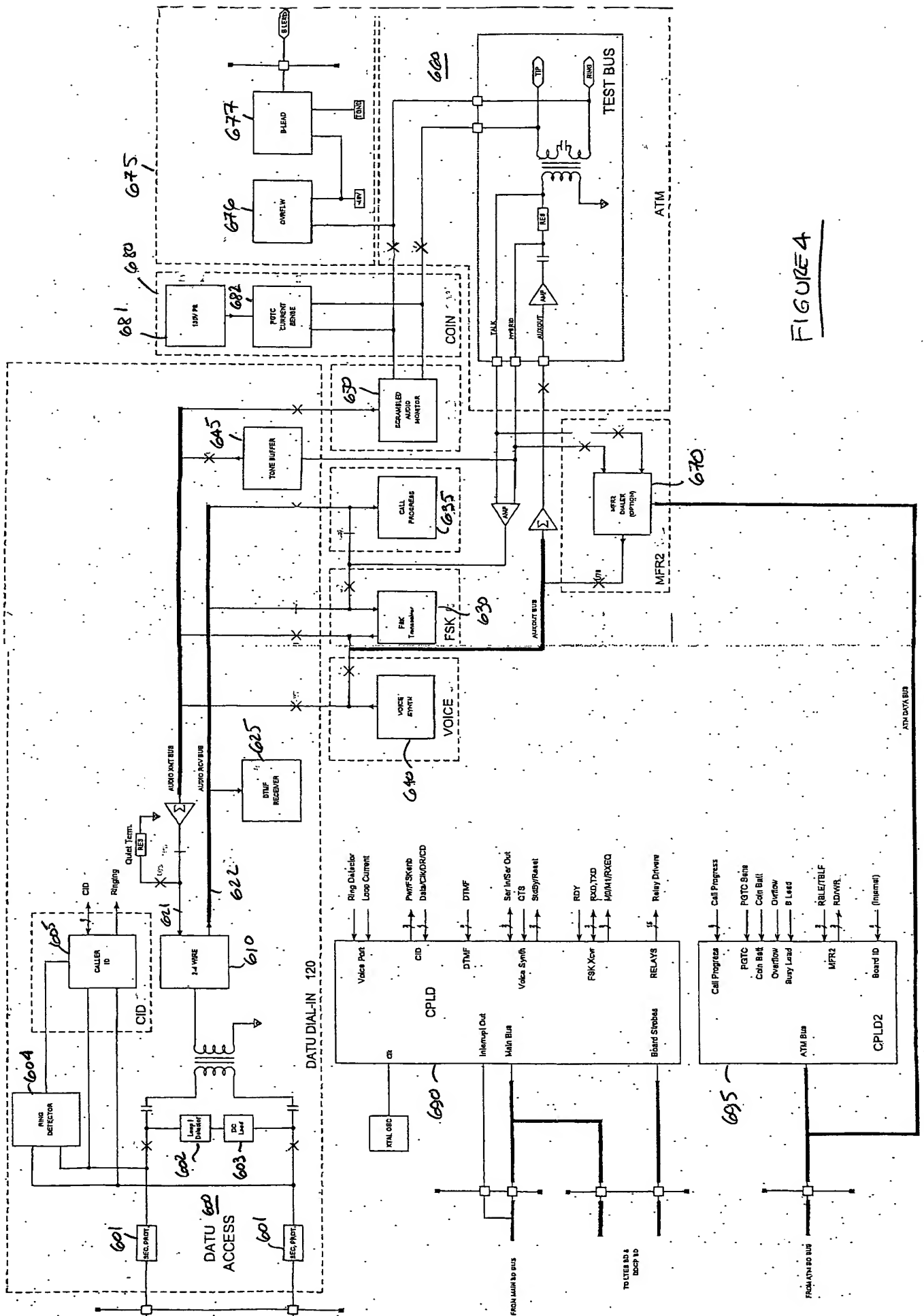


FIGURE 4

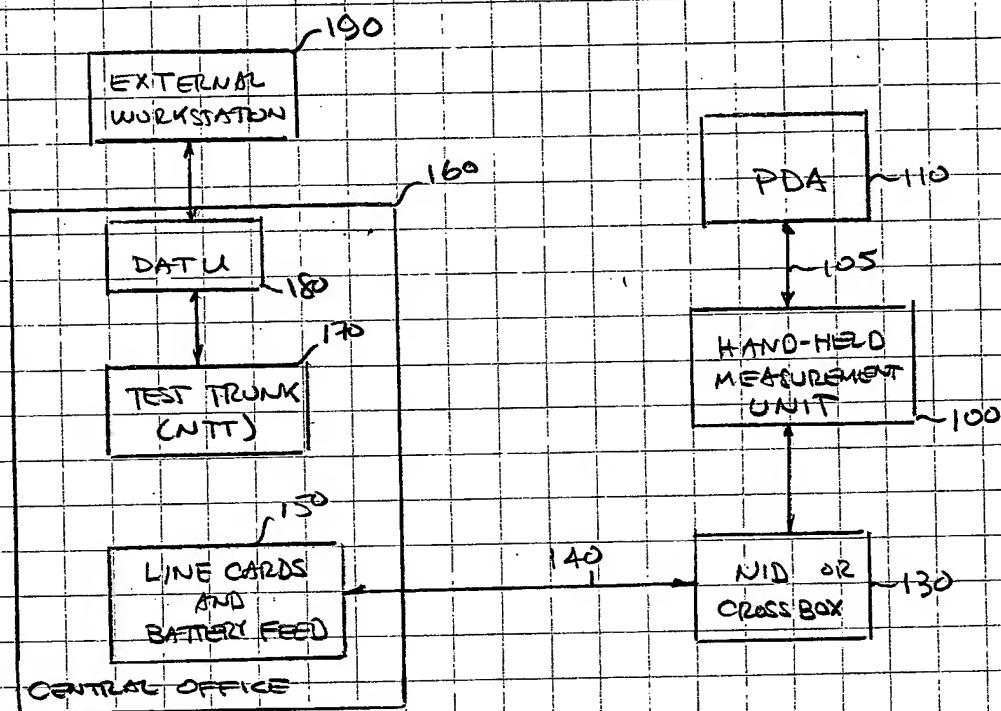


FIGURE 5

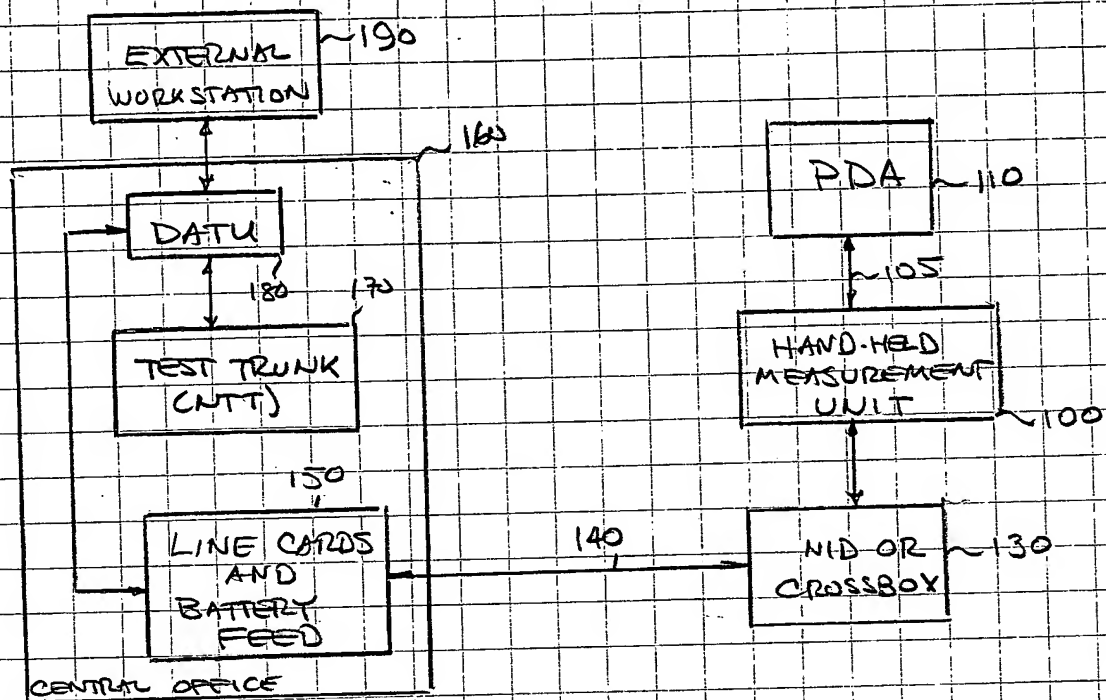


FIGURE 6

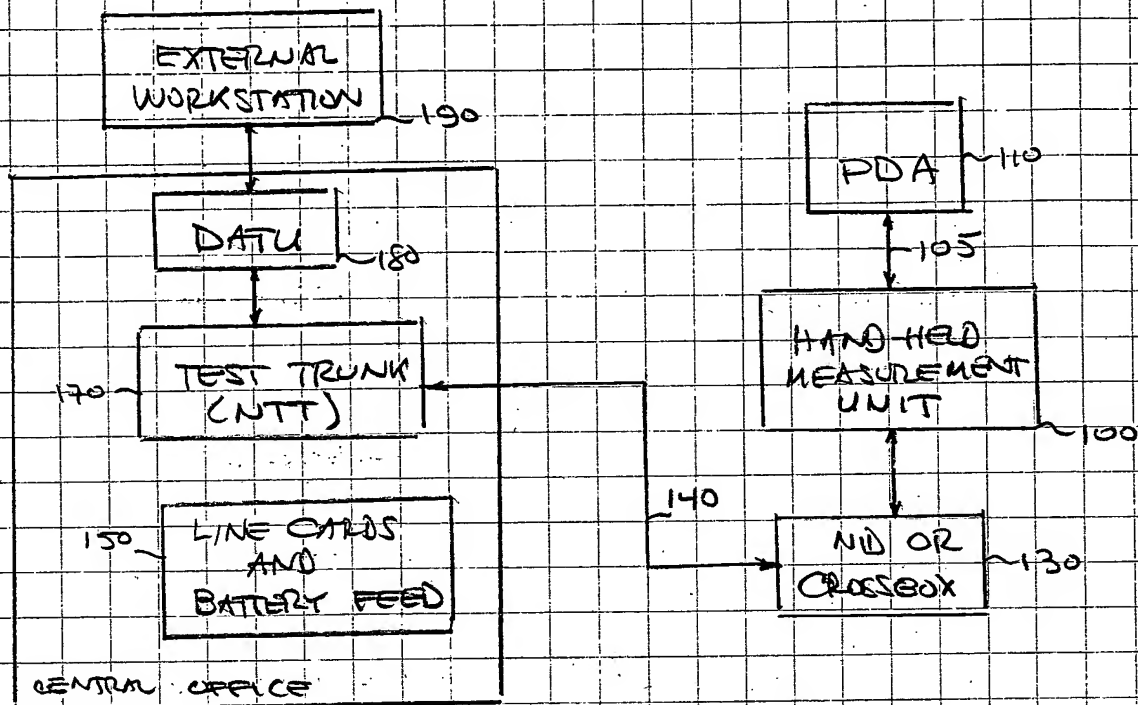


FIGURE 7.

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (DATU)

CONNECT TO LINE UNDER TEST - 801

MEASURE AND RECORD
AC AND DC LINE VOLTAGE - 802

(AC VOLTAGE TEST NO. 1)
(DC VOLTAGE TEST NO. 2)

DRIVE LINE OFF-HOOK,
MEASURE AND RECORD
LOOP CURRENT - 803

(LOOP CURRENT TEST NO. 3)

QUALIFY DIAL TONE,
DIAL DATA ACCESS NUMBER - 804

MONITOR CALL PROGRESS
TONES INCLUDING SIT TONES - 805

806 ~ DETECT RING-IN SIGNAL AND
CAPTURE CALLER ID

807 ~ TRIP RINGING AFTER RECEIPT OF
CALLER ID BEFORE SECOND
RINGING SIGNAL

808 ~ GENERATE 350/440 Hz DIAL
TONE FOR 500 ms

DIAL DTMF ESCAPE SEQUENCE - 809

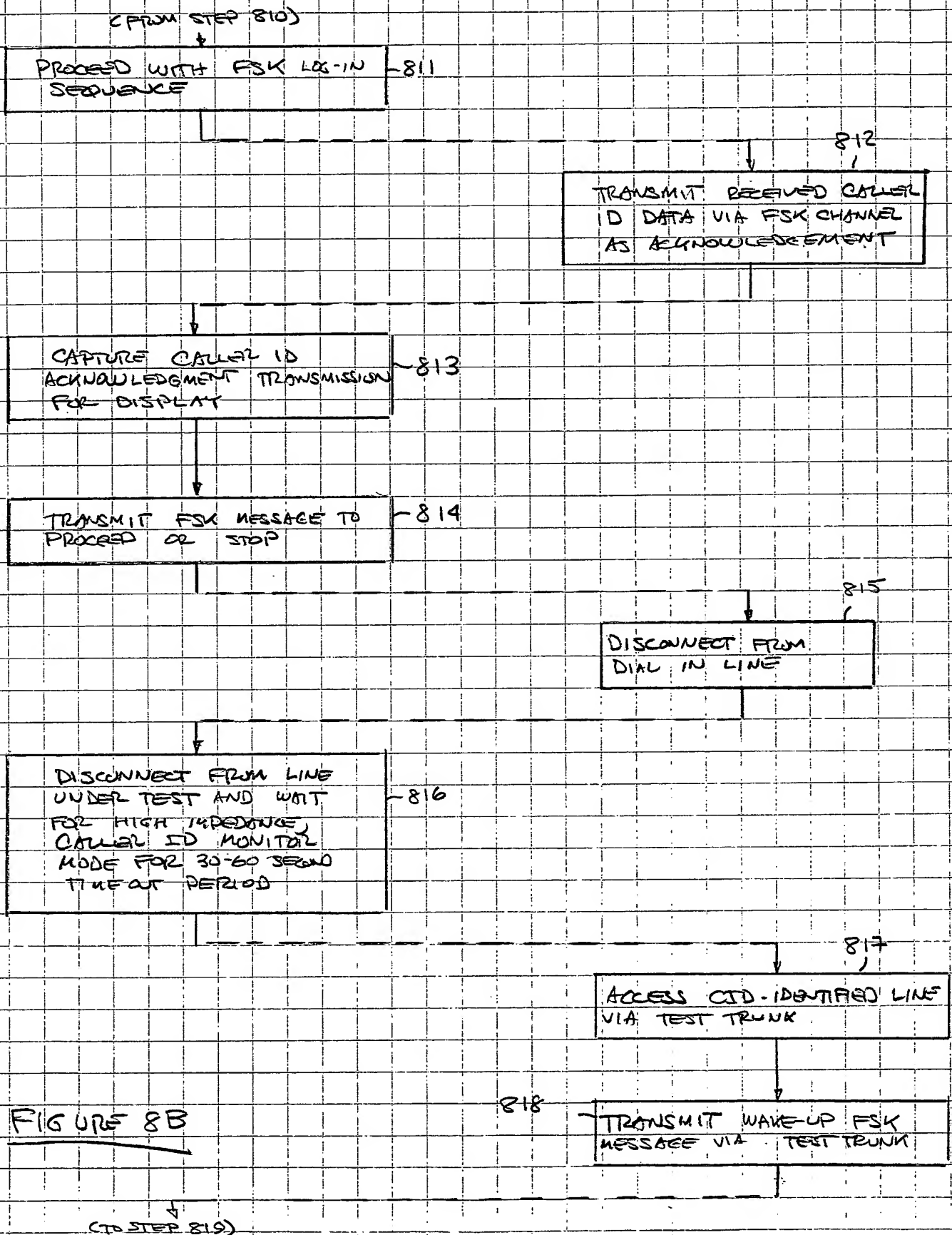
810 ~ WAIT FOR DTMF ESCAPE SEQUENCE

(TO STEP 811)

FIGURE 8A

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (COAU)



HAND-HELD MEASUREMENT UNIT

(FROM STEP 818)

ACTIVATE 600 OHM AC-TERMINATION
AND TRANSMIT FSK ACKNOWLEDGEMENT - 819

INITIATE INTERACTIVE AUTO TEST
SEQUENCE - 820

STEP THROUGH AUTO TEST
SEQUENCE BY PROVIDING
CONDITION OR MEASUREMENT
AS REQUIRED - 822

TRANSMIT MEASUREMENT
TEST RESULTS VIA FSK
CHANNEL TO DATA - 824

DISPLAY INFORMATION AND
DISCONNECT FROM LINE - 826

CENTRAL OFFICE UNIT (DATA)

821
STEP THROUGH AUTO TEST SEQUENCE
BY PROVIDING CONDITION OR
MEASUREMENT AS REQUIRED

823
UPON COMPLETION OF AUTOTEST
SEQUENCE, TRANSMIT DATA
MEASUREMENT TEST RESULTS
VIA FSK CHANNEL TO
HAND-HELD MEASUREMENT UNIT

825
TRANSMIT ACKNOWLEDGEMENT AND
DISCONNECT MESSAGE

827
DISCONNECT FROM TEST TRUNK

828
STORE TEST RESULTS, CID NUMBER,
NAME, TIME, TECHNICIAN ID, PASSWORD,
HAND-HELD UNIT ID.

FIGURE 8C

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (DATA)

FIGURE 9A

DIAL-UP AND LOG IN TO DATA;
REQUEST AUTO TEST;
DISCONNECT AND WAIT FOR
DATA ACKNOWLEDGEMENT VIA
TEST TRUNK CONNECTION;
BEGIN INTERACTIVE
AUTO TEST SEQUENCE

901

902
GENERATE MILLIWATT TONE
(1004 HZ) FOR THREE SECONDS

903

MEASURE AND RECORD LOSS
OF (1004 HZ) MILLIWATT TONE

('LOSS' TEST NO. 4)

904

ACTIVATE QUIET TERMINATION
FOR FIVE SECONDS

905

MEASURE AND RECORD POWER
INFLUENCE

('POWER INFLUENCE' TEST NO. 5)

906

MEASURE AND RECORD
CIRCUIT NOISE

('CIRCUIT NOISE' TEST NO. 6)

907

SUBTRACT CIRCUIT NOISE
FROM POWER INFLUENCE
TO DERIVE BALANCE;
RECORD BALANCE

('BALANCE' TEST NO. 7)

908

PROVIDE OPEN LINE
FOR EIGHT SECONDS

(TO STEP 909)

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (COATU)

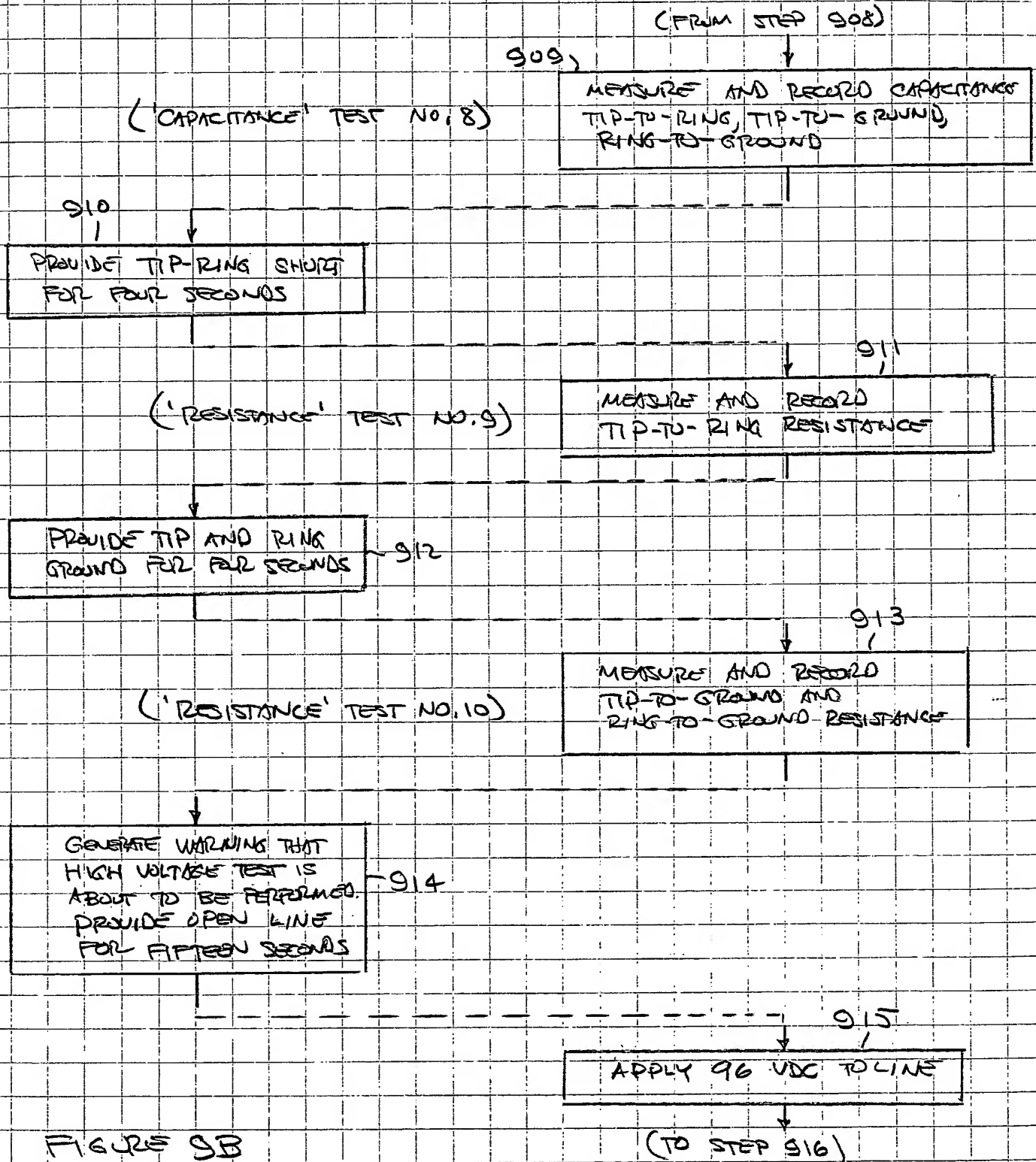


FIGURE SB

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (DATA)

(FROM STEP 915)

(1 'STRESS' TEST NO. 11)

MEASURE AND RECORD LEAKAGE
TIP-TO-RING, TIP-TO-GROUND,
RING-TO-GROUND

916

OPEN LINE ~ 917

(1 'LOAD COIL' TEST NO. 12)

PERFORM LOAD COIL
DETECTION

918

FIGURE 9C